UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

JUL 9 1995

Ref: 8HWM-HW

MEMORANDUM

TO: Matthew A. Straus, Director
Waste Management Division (OS-320W)

FROM: Robert L. Duprey, Director
Hazardous Waste Management Division (8HWM)

SUBJECT: Magcorp Bevill Exemption

On April 21, 1993, Magcorp wrote a letter to Dennis Downs, Director of the Utah Department of Environmental Quality (UDEQ), challenging Region VIII's interpretation of the Bevill Exempt status of a wastewater stream at the Magcorp facility. UDEQ requested further clarification from the Region regarding the scope of the exemption. I am requesting this clarification from your office to assist the Region and UDEQ in an ongoing enforcement action.

Magcorp was granted a Bevill Exemption for its process wastewater from primary magnesium processing by the anhydrous process on July 13, 1991 (56 Fed. Reg. 27300). In March, April and May of 1992, EPA and UDEQ performed Compliance Evaluation Inspections at the facility, and cited Magcorp for failing to determine whether wastes entering a surface impoundment via a wastewater stream combining the Bevill Exempt waste streams and other wastewater streams, were hazardous. The facility has claimed that the combined wastewater stream is covered under the Bevill Exclusion for the facility.

On August 4, 1992, EPA Region VIII sent a letter to William Sinclair which outlined EPA's interpretation of the Exemption (Attachment 1). In this memo, EPA restricted the exemption to a literal reading of the exemption as codified. EPA restricted the exemption to only the boron liquid and calcium sulfate from desulfination operations, the scrubber liquor from the cathode scrubbers, and the scrubber underflow from the fume scrubbers. EPA further stated that if the facility is currently including other hazardous wastes in the stream going to the surface impoundment, they may be operating a TSD without a permit. We have previously discussed this matter with Bob Hall of your office. Our August 4, 1992, letter was discussed with Bob prior to our sending it to UDEQ.

On April 21, 1993, Magcorp sent a letter to Dennis Downs (Attachment 2) claiming that EPA, via its sampling and analysis, intended that the entire wastewater stream from the facility was exempt. Magcorp claims that by virtue of the sampling locations, and the waste volumes cited in EPA's report to Congress ("Report to Congress on Special Wastes from Mineral Processing", July, 1990), the entire wastewater stream from the facility was intended to be exempted. We refer you to page 4, paragraph 4 of the April 21, 1993 letter for a summary of Magcorp's position.

We request that your office provide the Region, and thereby the State of Utah, a determination of the intent of the subject Exemption. I feel that Terry Anderson's August 4, 1992 letter is correct in that the scope of the exemption was limited to the wastewater streams only directly related to the processing of the ore, and not a combined waste stream of all wastewaters from the facility. We believe that when unique hazardous wastes are introduced into a Bevill exempt waste stream, as is apparently the case at Magcorp, then the combined waste stream is subject to full Subtitle C requirements.

Please call Larry Wapensky of my staff at (303) 293-1509, if you have any questions regarding this request.

Attachment

cc: D. Downs UDEQ
D. Verbica UDEQ
J. Ackerman EPA

ATTACHMENT 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

Ref: 8HWM-HW

AUG 4 1992

Mr. William J. Sinclair, Manager
Hazardous Waste Branch
Division of Solid and Hazardous Waste
UDEQ
Salt Lake City, UT 84114-4880

Dear Mr. Sinclair:

We are writing to clarify the status of Bevill wastes generated at the Magnesium Corporation of America (MagCorp) facility. The issue of which wastes are exempt was raised during the State's compliance evaluation inspection (CEI) on March 17, April 1, and May 6, 1992. EPA inspector Joyce Ackerman accompanied the State inspectors during the CEI on March 17. We have analyzed the facility's interpretation of its Bevill exemption, as described below.

The facility has a 400 acre surface impoundment which is used for disposal of several liquid waste streams. Facility representative Tom Tripp stated that the following waste streams are discharged into the surface impoundment:

- Boron liquid
- Liquids from the reactor and melt cells, on a non-routine basis
- Spent liquor from the cathode scrubber
- Washdown water from facility cleaning operations
- Calcium sulfate from the desulfation process
- Lab drains
- Stormwater
- Vehicle maintenance floor drains
- Floor drains in all buildings
- Calcium chloride from CaCl production
- Sulfur dioxide scrubber waste
- Used antifreeze
- Demineralized water plant discharge
- Surface runoff
- Cooling tower discharge
- Gypsum slurry
- Ethylene glycol from auto shop and casthouse
- Cell salt
- Lubrication oils from compressor blowdown

Facility representatives stated that all wastewater streams with the exception of sewage are disposed in the surface impoundment. Therefore, it is likely that the facility generates

other wastewater streams in addition to those listed by Tripp that are disposed in the surface impoundment.

During the inspection, facility representative Tom Tripp stated that he believes all wastewaters discharged into the surface impoundment are Bevill-exempt. Tripp further stated that he believed the surface impoundment itself is Bevill-exempt.

This is an incorrect interpretation of the facility's Bevill exemption. The facility generates two types of waste that are potentially Bevill-exempt: beneficiation wastes and mineral processing wastes. The status of these types of wastes are described below.

BENEFICIATION WASTES

On December 31, 1985, EPA published the Report to Congress on solid wastes from mineral extraction and beneficiation, and on July 3, 1986 published a determination that regulation of such wastes under Subtitle C of RCRA was not warranted. Therefore, any beneficiation wastes generated at MagCorp would not be regulated as hazardous waste. The July, 1990, Report to Congress on Special Wastes from Mineral Processing defines which wastes at MagCorp are considered beneficiation wastes. They include "...concentration of salt brine solution; precipitation of potassium; treatment with calcium chloride for partial removal of sulfates; and removal of boron by phase separation (i.e., solvent extraction) using isooctanol in a kerosene carrier." Therefore, the boron liquid and calcium sulfate from desulfation operations that are being disposed in the surface impoundment are considered exempt from Subtitle C.

MINERAL PROCESSING WASTES

In July, 1990, EPA published the Report to Congress on Special Wastes from Mineral Processing, and issued the final regulatory determination on May 20, 1991. The regulatory determination excludes 20 mineral processing wastes from Subtitle C regulation. One of the 20 excluded wastes is "process wastewater from primary magnesium processing by the anhydrous process," which is applicable to MagCorp. The 1990 Report to Congress defines which process wastewater streams at MagCorp are excluded, as explained below.

The only wastes which were considered for the final mineral processing exclusion were those that met the "high volume, low hazard" criteria established by EPA. Two wastewater streams were identified at MagCorp which satisfied the high volume, low hazard criteria: a scrubber underflow from a hydrochloric acid purification operation (fume scrubbers), and scrubber liquor from

a chlorine gas purification process (cathode scrubbers). These are the only two wastewater streams at MagCorp which are eligible for the mineral processing waste exclusion.

There is some confusion regarding the scrubber underflow from the fume scrubbers. During the March 17, 1992, inspection, facility representatives stated that there was no scrubber underflow from the fume scrubbers discharged to the surface impoundment. However, the questionnaire submitted to EPA by the facility during the preparation of the Report to Congress contains a schematic of the facility process. The schematic shows CaCl2 thickener underflow being discharged to the NPDES waste pond. We are not certain whether MagCorp has changed its process since the 1990 Report to Congress, or whether the facility submitted erroneous information to EPA in the questionnaire. Nevertheless, the only wastewater streams eligible for the mineral processing exclusion are the scrubber liquor from the cathode scrubbers and the scrubber underflow from the fume scrubbers (if it exists).

SUMMARY

The only wastes that are excluded from Subtitle C regulation at MagCorp are beneficiation wastes and mineral processing wastes. Both types of wastes are defined in the July, 1990, Report to Congress. During the CEI, facility representatives stated that a variety of other wastes were also being discharged to the surface impoundment, and that they believed all these wastes were excluded.

This is an incorrect interpretation of the facility's Bevill exclusion. All wastes which are not beneficiation or mineral processing wastes are potentially subject to Subtitle C regulation. For example, facility representatives stated that the following materials are also discharged to the surface impoundment:

- Washdown water from facility cleaning operations,
- Lab drains
- Vehicle maintenance floor drains
- Floor drains in all buildings
- Used antifreeze
- Demineralized water plant discharge
- Cooling tower discharge
- Gypsum slurry
- Ethylene glycol from auto shop and casthouse
- Cell salt
- Lubrication oils from compressor blowdown

The facility must determine whether these wastes are hazardous wastes pursuant to 40 CFR 262.11, and equivalent State regulations. Failure to comply with the provisions of 40 CFR

262.11 is a violation of RCRA. Further, if any of these wastes are hazardous wastes, their disposal in the surface impoundment constitutes illegal disposal. Any other wastes discharged to the surface impoundment which are not beneficiation wastes or mineral processing wastes are also subject to the provisions of 40 CFR 262.11. If the facility wishes to use the surface impoundment for hazardous waste storage and disposal, the facility would be considered a treatment, storage, and disposal facility (TSD) and must be in compliance with all applicable provisions of 40 CFR 264, including the minimum technological requirements for surface impoundments.

If you have any questions, please call Joyce Ackerman at (303) 293-1840.

Sincerely yours,

for Lawrence W. Wagenhoft

Terry L. Anderson, Chief
Hazardous Waste Branch

FCD:July 28, 1992:

ATTACHMENT 2

magcorp

Magnesium Corporation of America

238 North 2200 West, Salt Lake City, Utah 84116
(801) 532-2043, Telex 6711664, Fax (801) 534-1407

April 21, 1993

Dennis Downs, Director
Division of Solid and Hazardous Waste
Department of Environmental Quality
288 North 1460 West
Salt Lake City, Utah 84114-4880

RE: NOVCO 92060124 - Exempt Status of Process Wastewater From Primary Magnesium Processing by the Anhydrous Process

Dear Mr. Downs:

It has come to our attention that the Division was provided with a memorandum dated August 4, 1992, from Terry Anderson of EPA Region VIII which purports to interpret the scope of the hazardous waste exclusion for "process wastewater from primary magnesium processing by the anhydrous process." The exclusion is codified in the federal regulations at 40 C.F.R. § 261.4(d)(7)(xv) and in the Utah Solid and Hazardous Waste Regulations at 315-2-4(d)(7)(xv).

It has always been Magcorp's position that this exclusion applies to all aqueous waste streams directly associated with the purification and electrolysis process at its Rowley facility. These wastewater streams combine in the main wastewater ditch and discharge to a pond. The wastewater stream at the Rowley facility was originally proposed for exclusion on the basis of the combined stream. It was sampled and evaluated by EPA on that basis, proposed for public comment on that basis, and finally determined by EPA to be excluded on that basis.

Mr. Anderson's memorandum, however, purports to redefine the scope of this established regulatory exclusion by suggesting that the exclusion does not cover the combined process wastewater stream at the Rowley facility but only certain components of it. His interpretation is clearly in error and is not supported by the lengthy record developed by EPA in evaluating and adopting the exclusion.

The substantial regulatory history clearly supports Magcorp's interpretation of the exclusion.

On October 21, 1980, Congress passed various amendments to the Resource Conservation and Recovery Act ("RCRA"), including an amendment to Section 3001 of RCRA known as the "Bevill Amendment" to exclude mine waste from hazardous waste regulation under subtitle C of RCRA pending completion of studies by the EPA. The Bevill Amendment expressly excluded "solid waste from the extraction beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore." On December 31, 1985, EPA submitted a

Report to Congress on wastes from the extraction and beneficiation of ores and minerals and subsequently, on July 3, 1986, issued a Regulatory Determination that such wastes would not be regulated under Subtitle C of RCRA. 51 Fed. Reg. 24496.

With respect to processing wastes, EPA proposed to narrow the scope of the mining waste exclusion based on a concept of "special waste" that would only exclude processing wastes which were high in volume and low in hazard. See 50 Fed. Reg. 40292 (October 2, 1985). EPA later withdrew this proposal on October 9, 1986 (51 Fed. Reg. 36233) and was subsequently challenged in court. EDF v. EPA, 825 F.2d 1316 (D.C. Cir. 1988). The court ordered EPA to return to its previously proposed concept of special waste based on high volume and low hazard and processing wastes that met those criteria.

On October 20, 1988, EPA issued a Notice of Proposed Rulemaking ("NPR") proposing to retain the mining waste exclusion for 15 specific high-volume processing wastes. 53 Fed. Reg. 41288. In response to comments received on that NPR, EPA, on April 17, 1989, issued another NPR which superseded and substantially revised the notice published on October 20, 1988, by expanding the exclusion beyond the previously proposed 15 wastes. 54 Fed. Reg. 15316. Specifically, EPA proposed to retain the exclusion for six processing wastes and to retain conditionally, pending further study, an additional 33 processing wastes. Among the 33 was "process wastewater from primary magnesium processing by the anhydrous process." This work was proposed to EPA on the basis of the combined process wastewater stream at the Rowley facility.

On September 1, 1989, EPA issued a Final Rule establishing the final criteria for mineral processing wastes and reducing the number of conditionally retained mineral processing wastes to 20. 54 Fed. Reg. 36592. The list of 20 included process wastewater from primary magnesium processing by the anhydrous process. On September 25, 1989, EPA issued a Proposed Rule to further reduce the list of 20 conditionally retained mineral processing wastes. 54 Fed. Reg. 39298. In the preamble to that rulemaking, EPA explained how it applied the criteria to each of the 20 conditionally retained mineral processing wastes using a three-step process. First, the agency applied the high volume criteria to the available waste generation data; it then applied the low hazard criterion to the available waste characteristics data; and finally, EPA combined the results to determine the proposed Bevill status of the 20 wastes. EPA reported the results of applying the criteria to each of the 20 wastes.

For process wastewater from primary magnesium processing by the anhydrous process, EPA reported an average per facility generation rate of 2,464,822 metric tons per year. That figure was obtained directly from the Rowley facility's response to EPA's 1989 National Survey of Solid Wastes from Mineral Process Facilities, (54 Fed. Reg. 39306) and was based on the combined wastewater stream at the Rowley facility. EPA concluded that the waste passed the high-volume

criterion of 1,000 metric tons per year. 54 Fed. Reg. 39305-39306. With respect to the low-hazard criterion, EPA reported that it had sampled and analyzed wastewater from the one primary magnesium processing facility (i.e., Rowley) and determined that the waste passed the low-hazard criterion. 54 Fed. Reg. 39307. EPA's sample was taken in June of 1989 during a visit to the Rowley facility. EPA's sample was taken from the combined wastewater stream in the main wastewater ditch downstream from the point of convergence of the component waste streams.

From the extensive preamble to the September 25, 1989 Proposed Rule, it is clear that EPA determined the Bevill exempt status for process wastewater from primary magnesium processing by the anhydrous process based on the volume reported by the Rowley facility for the combined process wastewater stream at the Rowley facility. There is no indication whatsoever that EPA in any way intended to limit the exclusion to the component wastewater streams.

On January 23, 1990, EPA issued a Final Rule reducing the number of conditionally retained mineral processing wastes from 20 to 15. EPA continued to retain "process wastewater from primary magnesium production by the anhydrous process" within the Bevill exclusion. EPA explained that it had only received one comment on the continued exclusion of that waste stream. The commenter had requested that EPA further consider the pH level of the waste stream in preparing its Report to Congress on mineral processing waste. EPA responded by pointing out that the waste qualified for the low-hazard criterion. 55 Fed. Reg. 2327.

In July of 1990, EPA issued its Report to Congress on special waste for mineral processing. Chapter 11 of that Report specifically addressed magnesium production and explained that the only anhydrous electrolytic magnesium production facility was located at Rowley, Utah, and was operated by Magcorp. The Report explained the waste characteristics, generation and current management practices at Rowley and recited the volume figure of 2,465,000 metric tons which was originally reported in the facility's response to the National Survey. EPA also explained its evaluation of the composition of magnesium process wastewater, based on the sampling conducted by EPA.

EPA sampled the process wastewater at the facility on June 20, 1989. Representatives of Magcorp were present and discussed with EPA representatives the composite nature of the process wastewater stream. EPA's sampling team collected a sample of wastewater from the main wastewater ditch at a point downstream from the convergence of all three wastewater streams. EPA's trip report documents that EPA specifically recognized that the sample was a composite of wastewaters from boron removal stripwaters; liquor from the cathode scrubber tower, and other process wastewaters. EPA also sampled wastewater along the perimeter of the receiving waste pond.

EPA's Report to Congress on process wastewater from primary magnesium processing by the anhydrous process was clearly based upon the volume of the combined process wastewater stream documented in the National Survey and upon the characteristics data obtained by EPA from its sampling of the combined process wastewater stream at the Rowley facility. It is simply undisputed that EPA sampled and evaluated the Bevill status of the waste on the basis of the combined wastewater stream.

On June 13, 1991, EPA issued its Regulatory Determination and Final Rule regarding application of the Bevill exclusion to mineral processing waste. 56 Fed. Reg. 27300. EPA determined that process wastewater from primary magnesium processing by the anhydrous process was one of nine processing wastes that should remain excluded from regulation under Subtitle C of RCRA. EPA made no suggestion that this waste stream did not include the combined process wastewater stream at the Rowley facility or that it should in any way be limited to certain component waste streams.

In his memorandum, Mr. Anderson attempts to draw upon a few isolated pieces of information concerning the nature of the anhydrous process to suggest that somehow EPA did not intend to define the waste on the basis of the combined waste stream. Mr. Anderson suggests that only two of the component waste streams in the overall process wastewater stream are excluded from Subtitle C regulation. The statement is absolutely without foundation and contrary to the facts.

The information supplied to EPA in 1989 in the Rowley facility's response to the National Survey of Solid Waste for Mineral Processing Facilities described the process wastewater from the anhydrous process "as all aqueous process wastewater streams from the magnesium chloride purification and electrolysis ares." During its visit to the Rowley facility in June of 1989, EPA inspected the process wastewater stream and concluded that it was a composite of wastewaters from the processing facility. EPA's trip report clearly documents that its representatives understood the composite nature of the wastewater and intended to evaluate and sample the combined wastewater stream. When EPA sampled the waste stream, it sampled the main wastewater ditch at the Rowley facility at a point downstream from the convergence of the component waste streams and upstream from the waste pond. There is nothing to support Mr. Anderson's statement that the Bevill exclusion only covers two components of the overall process waste stream.

In this regard, it is important to reemphasize that EPA based its determination of Bevill status for the magnesium process wastewater stream on the characteristics and volume of the combined waste stream. Obviously, the volume figure would have been much lower if EPA only intended to extend the exclusion to a portion of the overall waste stream.

A careful examination of EPA's actions, sampling and source documentation in developing its Regulatory Determination conclusively establishes that the exclusion for process wastewater from the anhydrous process extends to the combined waste stream as reported by the Rowley facility and as evaluated and sampled by the EPA. Based on that determination, the exclusion is now established in final regulations issued by EPA and by the Utah Solid Hazardous Waste Control Board.

We hope the foregoing explanation of the development of the Bevill exclusion for process wastewater from the anhydrous process has been helpful in clarifying any confusion that may have been created by Mr. Anderson's memorandum.

Very truly yours,

G.T. Tripp
Environmental Manager

scg